

Appln. No. 10/646,162
Amendment dated January 19, 2005
Reply to Office Action mailed October 19, 2004

REMARKS

Reconsideration is respectfully requested.

Claims 1 through 7 remain in this application. No claims have been cancelled or withdrawn. Claims 8 through 13 have been added.

The Examiner's rejections will be considered in the order of their occurrence in the Office Action.

Paragraph 1 of the Office Action

The drawings have been objected to.

Submitted herewith is applicant's proposed amendment of the drawing. Specifically, in Figure 3B of the drawings as originally filed, the legend "MUX" has been added to element "224", which is illustratively identified in the specification at page 9, line 7, as a "multiplexer", and the legend "DRIVER" has been added to element "226", which is illustratively identified in the specification at page 9, line 11, as "driver" logic.

In light of the proposed drawing amendment, it is therefore submitted that the objection to the drawings as originally filed has been overcome, and withdrawal of the objection to the drawings is respectfully requested.

Paragraph 2 of the Office Action

The specification has been objected to for the informalities noted in the Office Action.

The specification has been amended in a manner believed to clarify any informalities in the language, particularly at the points identified in the Office Action.

Withdrawal of the objection is respectfully requested.

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Paragraph 3 of the Office Action

Claims 2, 4 and 6 have been objected to for the informalities noted in the Office Action.

Claims 2, 4, and 6 have been amended in the manner suggested in the Office Action.

Withdrawal of the objection to claims 2, 4 and 6 is therefore respectfully requested.

Paragraphs 4 through 6 of the Office Action

Claims 5, 6 and 7 have been rejected under 35 U.S.C. §112 (second paragraph) as being indefinite.

The above amendments to claim 5 are believed to clarify the requirements of the rejected claims, especially the particular points identified in the Office Action.

Withdrawal of the §112 rejection of claims 5, 6 and 7 is therefore respectfully requested.

Paragraph 7 of the Office Action

Claims 6 and 7 have been amended to depend from claim 5, and therefore the duplication concern set forth in the Office Action is submitted to be moot.

Paragraphs 8 and 9 of the Office Action

Claims 1 through 7 have been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Bush et al. (Bush; US Patent 5,214,762).

Claim 1 requires, in part, “the activity indicator configured to provide a continuous indication of the presence of a *first continuous operating condition associated with the electronic device*”, “the activity detection circuit configured to generate an activity signal when detecting a *second*

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periodic operating condition associated with the component", and "wherein the activity indicator is interrupted from continuously indicating the presence of the first continuous operating condition by the activity signal, thereby producing an indication of the second periodic operating condition".

In contrast to the requirements of claim 1, the Bush patent discusses a disk drive activity indicator in which an LED is turned on only when disk drive activity is detected.

In particular, claim 1 recites "*a continuous indication of the presence of a first continuous operating condition associated with the electronic device*". In the rejection of claim 1 in the Office Action, it is stated that (emphasis added):

The claimed activity indicator configured to provide a continuous indication of the presence of a first continuous operating condition associated with the electronic device is met by the LED being triggered in response to I/O operations involving the hard drive (abstract) and therefore by definition the LED is not triggered (turned off) during the period when the computer is on but there is no activity involving the hard drive. Therefore the LED is continually indicating that there is no activity in the hard drive while it is off;

It appears that the rejection is based upon the position that a *lack* of activity by the disk drive is a "continuous operating condition", and thus the absence of any indication from the disk drive activity indicator of Bush is actually a "continuous indication" of that continuous *lack* of activity by the disk drive. However, it is submitted that the *non-operation* of the disk drive, which is what leads to the disk drive indicator of Bush remaining turned off, is not considered by one of ordinary skill in the art to be a "continuous operating condition" as required by claim 1.

Contrary to the allegation in the Office Action that "the LED is not triggered (turned off) during the period when the computer is on but there is no activity involving the hard drive", a user of the Bush system, viewing the LED of the disk drive activity indictor, does not know if the LED is "turned

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off" because there is presently no disk drive activity, or is "turned off" because the entire computer system is simply "turned off". Absent the presence of some disk drive activity, the Bush indicator is not only "turned off" when there is no disk drive activity, but is also "turned off" when the computer is "turned off". Thus, unless there is currently some disk drive activity actually occurring, one has no idea from the Bush indicator whether the computer is "on" or "off".

Claim 1 also requires "the activity detection circuit configured to generate an activity signal when detecting a second periodic operating condition *associated with the component*". In contrast to this requirement, the positions set forth in the Office Action do not appear to recognize any difference between "a first continuous operating condition *associated with the electronic device*" and "a second periodic operating condition *associated with the component*". The positions taken in the Office Action appear to all relate to the operating states of the disk drive of Bush, such as in the portion of the Office Action where it is stated that (emphasis added):

The claimed activity indicator being interrupted from continuously indicating the presence of the first continuous operating condition by the activity signal, thereby producing an indication of the second periodic operating signal is met by the LED being triggered (turning on) when the triggering logic detects an I/O function relating to the hard drive (abstract).

It is submitted that the Bush patent would not lead one of ordinary skill in the art to consideration of operating conditions of both "an electronic device" and "a component of the electronic device", as required by claim 1, and the rejection of the office Action appears to reflect this, as only the operating states of the disk drive (and not the operating condition of the entire Bush computer system) are discussed. But, as noted above, the user of the Bush system is not provided with any information as to whether the computers system is turned on or turned off, unless, and only when, disk drive activity is actually occurring.

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The rejection of claim 1 in the Office Action further alleges that (emphasis added):

The indications of the disclosed invention and claimed invention both correspond to the same events; the activation and non-activation of an electronic device such as a hard disk-drive. The choice of indications themselves, whether they are continuously on and interrupted on activation or continuously off and turned on during activation, does not merit novel inventive material. Therefore it would have been obvious to one of ordinary skill in the art to have chosen either of the above mentioned indication choices.

The undersigned is not aware of the requirement in the patent law that an invention must "merit novel inventive material" to be patentable. The claimed invention is novel, as the assertion of the §103 rejection (rather than a §102 rejection) based on the Bush patent appears to concede. The presence of "inventive material" appears to be a reference to the belief that the claimed invention is "obvious" in view of the Bush patent. It is noted that the rejection in the Office Action presents no evidence to support a contention that one of ordinary skill in the art would be motivated to modify the Bush system to meet the claimed invention, and it is submitted that there is no motivation presented by Bush that would motivate such a change of the Bush system.

It appears that this portion of the rejection is taking the position that the difference between the requirements of claim 1, and the disclosure of the Bush patent, is merely a "matter of design choice", or some similar reasoning. However, the claimed invention is not merely another equivalent "choice" that one of ordinary skill in the art could make for indicating disk drive activity, as the function of the claimed system provides additional capabilities as compared to the Bush system.

In particular, it is submitted that the disk drive activity indicator system taught by Bush, and its manner of indicating disk drive activity, is completely incapable of providing an effective indication of the "power on" or "power off" status of the Bush system, as the disk drive activity indicator

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only illuminates during the time that disk drive accesses or interrupts are actually occurring. More significantly, Bush discloses that the disk drive activity indicator is "off" during times that specific disk activity is not occurring, but would also be "off" when the Bush system is powered down (and thus there is no disk activity because the power to the system is cut off). As a result, a user of the Bush system would not be able to look at its disk drive activity indicator and be able to tell if the system is powered up, unless disk activity happened to coincide with the precise time that the user looked at the disk drive activity indicator. In contrast, with the system of claim 1, one simply has to look to the claimed indicator to see if power is being supplied to the system, and if the indicator is periodically being interrupted (such as by flashing off), one also knows that disk activity is occurring.

It is noted with regard to obviousness rejections based upon a difference merely being a matter of design choice, it is noted that the Federal Circuit has spoken on the issue of when basing a rejection on "design choice" is not correct:

From the totality of the record, we hold that placement of the SCR catalyst within the bag retainer would not have been merely a matter of "design choice." First, there is no teaching or suggestion in the prior art that would lead one of ordinary skill in the art to modify the Szymanski structure to place the SCR catalyst within a bag retainer as opposed to between two filter bags as disclosed in Szymanski. Next, Chu's technical evidence relating to the frailty of fabric filters during pulse-jet cleaning clearly counters the assertion that placement of the catalyst in the baghouse is merely a "design choice." Specifically, Chu's evidence regarding the violent "snapping" action during pulse-jet cleaning, the difficulty in stitching compartments including the capacity to withstand high temperatures, and problems encountered from variable path lengths due to settling of the catalyst particles in each compartment militates against a conclusion that placement of the SCR catalyst is merely a "design choice." See *In re Gal*, 980 F.2d 717, 25 USPQ2d 1076 (Fed. Cir. 1992) (finding of "obvious design choice" precluded where the claimed structure and the function it performs are different from the prior art).

In re Chu, 36 USPQ 2d 1089, 1095 (Fed. Cir. 1995) (emphasis added)

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Thus, if the prior art does not motivate the modification of the prior art structure to achieve the claimed structure, and there is a benefit that is associated with the claimed structure over the prior art structure, the claimed structure cannot be dismissed as "merely a design choice". As noted above, and in the specification of the present patent application, there is a clear benefit to having a single indicator that provides an indication of the operating conditions of two elements. Further, it was not alleged in the Office Action that the Bush patent, or the prior art, provides one of ordinary skill in the art with any motivation to modify the Bush system to meet the requirements of claim 1, or claim 5. It is submitted that one of ordinary skill in the art, considering the Bush patent and the knowledge that heretofore power indicators and disk activity indicators are separate elements, would presume that the Bush system employs a separate power on indicator, and thus any attempt to further modify the Bush disk drive activity indicator to also indicate the power status of the system would be superfluous.

It is therefore submitted that the Bush patent would not lead one of ordinary skill in the art to the applicant's claimed invention as defined in claims 1 and 5, especially with the requirements set forth above, and therefore it is submitted that claim 1 is allowable over the prior art. Further, claims 2 through 4, which depend from claim 1, and claims 6 through 7, which depend from claim 5, also include the requirements discussed above and therefore are also submitted to be in condition for allowance.

Withdrawal of the §103(a) rejection of claims 1 through 7 is therefore respectfully requested.

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Added Claims

Added claim 8 requires that "the continuous indication by the activity indicator is characterized by illumination of the activity indicator, and interruption of the continuous indication of the activity indicator is characterized by extinguishing the activity indicator". This requirement further characterizes the attributes of the system of claim 1 that distinguish the present invention from the system of the Bush patent.

Added claim 9 is an independent claim that requires "an activity indicator on the electronic device, the activity indicator being configured to provide a continuous indication of the presence of a power-on operating condition of the electronic device", "an activity detection circuit coupled to the activity indicator, the activity detection circuit configured to generate an activity signal when detecting an intermittent operating condition associated with activity by the storage device, and to communicate the activity signal to the activity indicator", and "wherein the activity indicator is interrupted from continuously indicating the presence of the power-on operating condition of the electronic device by the activity signal to thereby produce an indication of the intermittent operating condition of the storage device". This claim provides further detail of the invention that is distinguished from the system of the Bush patent.

Added claim 10 requires that "the activity by the storage device comprises transferring data to or from the storage device". Added claim 11 requires that "the storage device comprises a hard disk drive". Added claim 12 requires that "the continuous indication by the activity indicator is characterized by illumination of the activity indicator, and interruption of the continuous indication of the activity indicator is characterized by extinguishing the activity indicator". As noted above, these requirements are completely contrary to the teaching of the Bush patent.

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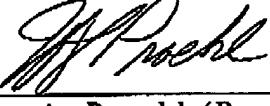
Added claim 13 includes the requirements of claims 10, 11, and 12, and for the reasons set forth above, is also submitted to be allowable over the prior art.

CONCLUSION

In light of the foregoing amendments and remarks, early reconsideration and allowance of this application are most courteously solicited.

Respectfully submitted,

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